

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 39

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte Michael L. BAUGHMAN

Appeal No. 95-5000
Application No. 08/021,883¹

ON BRIEF

Before STONER, Chief Administrative Patent Judge and
NASE and CRAWFORD, Administrative Patent Judges.

NASE, Administrative Patent Judge.

¹ Application for patent filed February 24, 1993. According to the appellant, the application is a continuation-in-part of Application No. 07/911,333, filed July 8, 1992, now abandoned, which was a continuation of Application No. 07/776,905, filed October 16, 1991, now abandoned, which was a continuation of Application No. 07/618,153, filed November 23, 1990, now abandoned, which was a continuation-in-part of Application No. 07/475,896, filed February 1, 1990, now abandoned.

DECISION ON APPEAL

This is a decision on appeal from the examiner's rejection of claims 1 to 5, 8, 9, 27 to 31, 34 and 38 to 43. Claims 17 to 19 have been canceled. Claims 6, 7, 10 to 16, 20 to 26, 32, 33, 35 to 37 and 44 to 49 have been withdrawn from consideration under 37 CFR § 1.142(b) as being drawn to a nonelected species.

We AFFIRM.

BACKGROUND

The appellant's invention relates to a system and method of diffusing gas bubbles into a body of water. An understanding of the invention can be derived from a reading of exemplary claims 1 and 27, which appear in the appendix to the appellant's brief.

The prior art references of record relied upon by the examiner as evidence of obviousness under 35 U.S.C. § 103 are:

Champeau
1974

3,790,141

Feb. 5,

Bearden 1974	3,852,384	Dec. 3,
Bailey et al. (Bailey) 1982	4,351,730	Sep. 28,

Claims 1 to 5, 8, 9, 27 to 31, 34 and 38 to 43 stand rejected under 35 U.S.C. § 103 as being unpatentable over Bailey in view of either Bearden or Champeau.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the § 103 rejection, we make reference to the examiner's answer (Paper No. 29, mailed June 26, 1995) for the examiner's complete reasoning in support of the rejection, and to the appellant's brief (Paper No. 22, filed April 28, 1995) and reply brief (Paper No. 30, filed August 29, 1995) for the appellant's arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the

respective positions articulated by the appellant and the examiner. Upon evaluation of all the evidence before us, it is our conclusion that the evidence adduced by the examiner is sufficient to establish a case of obviousness with respect to all the claims under appeal. Accordingly, we will sustain the examiner's rejection of claims 1 to 5, 8, 9, 27 to 31, 34 and 38 to 43 under 35 U.S.C. § 103. Our reasoning for this determination follows.

In accordance with the appellant's "GROUPING OF CLAIMS" (brief, p. 6), we need only review independent claims 1 and 27 to decide the appeal on the rejection under 35 U.S.C. § 103. Dependent claims 2 to 5, 8, 9, 28 to 31, 34 and 38 to 43 will stand or fall with their respective independent claim.

As a preliminary matter, we base our understanding of the phrase "a lake-like body of water" as recited in claims 1 and 27 to mean "a pond, lagoon, tank or other basin of water" for consistency with the appellant's original disclosure (specification, pp. 1 and 7) since the term "lake" or "lake-like" does not appear in the original disclosure.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A prima facie case of obviousness is established by presenting evidence that the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references before him to make the proposed combination or other modification. See In re Lintner, 9 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

With this as background, we analyze the prior art applied by the examiner in the rejection of the claims on appeal.

Bailey discloses a system and method for the treatment of sewage having a step in which sewage is circulated in a riser and a downcomer communicating with each other at their upper and lower ends and in which an oxygen-containing gas is supplied to the sewage as it passes through the riser and the downcomer. The riser and downcomer are preferably located in a shaft extending into the ground for at least 40 meters below

a basin containing the sewage. Bailey prefers (col. 3, lines 34-40) that the gas is injected into both chambers at a position between 0.1 and 0.4 times their total length below the level of sewage in the basin.²

Bearden discloses a system and method for efficiently providing aeration of water in a ponding area such as a sewage ponding tank to maintain the oxygen content of the water at a level sufficient to satisfy the biological and chemical oxygen demand (BOD and COD). As shown in Figure 1, the ponding area is

provided with an open-ended elongated tube 10 vertically positioned with its lower end above a gas bubble generator 15-18 so that gas bubbles are entrained in the liquid and carry the liquid and bubbles up through the tube. A plurality of orifices 19 are provided in the tube walls to draw in liquid from the side portions of the tube at a point above the lower end of the tube to increase the efficiency of the aeration.

² Accordingly, gas is injected into the riser at least 4 meters below the basin when the riser and downcomer extend 40 meters below the basin.

Champeau discloses a system and method for circulating a liquid mixture such as a water/paraffin mixture for aerobic fermentation, which includes a parallelepiped vessel 1, parallel vertical partitions 2 spaced from the top and bottom of the vessel and defining flow paths, gas injection means 11-15 at the foot of some flow paths to establish upward flow therein and guide vanes 10 and 16 to promote flow from flow paths of one direction to the flow paths for return flow.

After the scope and content of the prior art are determined, the differences between the prior art and the claims at issue are to be ascertained. Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966).

Based on our analysis and review of Bailey and the appellant's claims 1 and 27, it is our opinion that the only difference³ is the limitation that "the volume of said body of

³ We agree with the examiner's determination that Bailey's basin 13 is "lake-like." Additionally, we note that the appellant has not contested this determination.

water that is located above said bottom being at all times less than about 1:10."

With regard to this difference, the appellant argues (brief, pp. 12-18) that the applied prior art would not have suggested this difference. We do not agree. We do not agree with the appellant's calculations that Bailey's below ground/above ground volume ratios range from a minimum value of just over 1:1 up to 7.2:1.⁴ Our reading of Bailey leads us to conclude that insufficient information is provided by Bailey for one skilled in the art to be able to determine the below ground/above ground volume ratio. While the claims of Bailey do recite "continuously circulating the bulk of sewage contained in the basin-downcomer-riser system at any one time down said downcomer, up said riser, and back down said downcomer," it is our determination that such recitation does not justify a conclusion that Bailey's below ground/above ground volume ratio is at least 1:1. In that regard, we view the term "bulk" as referring to the amount of sewage that is

⁴ See also page 6, lines 10-18, of the appellant's specification.

recirculated in the system, that is, a majority of the sewage that flows down the downcomer and then up the riser is recirculated back down the downcomer. Thus, since Bailey is silent as to the below ground/above ground volume ratio, it is our view the recited ratio is a matter of design choice lacking any criticality since it solves no stated problem. As stated in In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990)

The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. [citations omitted]. These cases have consistently held that in such a situation, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range.

We find the appellant's further argument (brief, pp. 7-12) that Bailey teaches away from the appellant's invention unpersuasive since it is not commensurate in scope with the claimed invention. In that regard, neither claim 1 or 27 recite (a) any limit on the depth to which the downflow channel and return channel can extend below the bottom of the body of water, (b) any limit on the pressure resulting from

the use of the downflow channel and return channel, (c) any limit on the length of the resulting flow path from the use of the downflow channel and return channel, or (d) any limit on the cross-sectional areas of the downflow channel and return channel.

We have reviewed the appellant's arguments (brief, pp. 18-22) but find no evidence in the record to establish either (1) unexpected results, or (2) that an art recognized problem existed in the art for a long period of time without solution. In that regard, we note that the attorney's arguments in a brief cannot take the place of evidence. See In re Pearson, 494 F.2d 1399, 1405, 181 USPQ 641, 646 (CCPA 1974).

In light of the foregoing, we conclude that the examiner has met his initial burden of establishing a prima facie case of obviousness with respect to claims 1 and 27.

SECONDARY CONSIDERATIONS

Having arrived at the conclusion that the teachings of the applied prior art are sufficient to establish a prima

facie case of obviousness, we recognize that the evidence of nonobviousness submitted by the appellant must be considered en route to a determination of obviousness/nonobviousness under 35 U.S.C.

§ 103. See Stratoflex Inc. v. Aeroquip Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983). Accordingly, we consider anew the issue of obviousness under 35 U.S.C. § 103, carefully evaluating therewith the objective evidence of nonobviousness supplied by the appellant. See In re Oetiker, 977 F.2d 1443, 1445-46, 24 USPQ2d 1443, 1444-45 (Fed. Cir. 1992); In re Piasecki, 745 F.2d 1468, 223 USPQ 785 (Fed. Cir. 1984).

In this case the appellant has submitted evidence in the form of two affidavits⁵ under 37 CFR § 1.132 to establish nonobviousness of the claimed invention. The Oswald affidavit states that the "deep shaft" system of aeration (as taught by Bailey) is the only known system wherein the air diffuser is submerged below the bottom of the body of water. The Boyd

⁵ Affidavit of Claude E. Boyd, filed April 6, 1995 and affidavit of William J. Oswald, filed May 9, 1995 (see Paper Nos. 17 and 27).

affidavit states that (1) the "deep shaft" system of aeration (as taught by Bailey) is the only known system wherein the air diffuser is submerged below the bottom of the body of water, (2) the air diffusers used for aeration of aquaculture ponds have in all cases been positioned on, or a short distance above, the bottom surface of the pond, and (3) a deep shaft of 40 meters as taught by Bailey is too deep for aquaculture ponds. It is our opinion that there is no nexus between the claimed invention and the evidence provided by the affidavits. In that regard, we note that the claims under appeal are not limited to an aquaculture pond. Furthermore, while evidence of nonobviousness is a factor that must be considered, it is not necessarily controlling. See Newell Companies, Inc. v. Kenney Manufacturing Co., 864 F.2d 757, 768, 9 USPQ2d 1417, 1426 (Fed. Cir. 1988).

In view of the foregoing, we are satisfied that when all the evidence is considered, the evidence of nonobviousness fails to outweigh the evidence of obviousness as in Richardson-Vicks Inc. v. Upjohn Co., 122 F.3d 1476, 44 USPQ2d

1181 (Fed. Cir. 1997) and EWP Corp. v. Reliance Universal, Inc., 755 F.2d 898, 225 USPQ 20 (Fed. Cir. 1985).

Accordingly, we sustain the examiner's rejection of independent claims 1 and 27, and claims 2 to 5, 8, 9, 28 to 31, 34 and 38 to 43 dependent thereon, under 35 U.S.C. § 103.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1 to 5, 8, 9, 27 to 31, 34 and 38 to 43 under 35 U.S.C. § 103 is affirmed.

No time period for taking any subsequent action in
connection with this appeal may be extended under 37 CFR
§ 1.136(a).

AFFIRMED

BRUCE H. STONER, JR., Chief)	
Administrative Patent Judge)	
)	
)	
)	
)	BOARD OF PATENT
JEFFREY V. NASE)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
)	
)	
MURRIEL E. CRAWFORD)	
Administrative Patent Judge)	

Appeal No. 95-5000
Application No. 08/021,883

Page 15

JAMES W. CLEMENT, ESQ.
120 SOUTH RIVERSIDE PLAZA
22ND FLOOR
CHICAGO, IL 60606

APPEAL NO. 95-5000 - JUDGE NASE
APPLICATION NO. 08/021,883

APJ NASE

CAPJ STONER

APJ CRAWFORD

DECISION: **AFFIRMED**

Prepared By: Delores A. Lowe

DRAFT TYPED: 24 Feb 00

FINAL TYPED: